

AQP5 (C-19): sc-9891

BACKGROUND

Aquaporins (AQPs) are a large family of integral membrane water transport channel proteins that facilitate the transport of water through the cell membrane. This function is conserved in animals, plants and bacteria. Many isoforms of aquaporin have been identified in mammals, designated AQP0 through AQP10. Aquaporins are widely distributed and it is not uncommon for more than one type of AQP to be present in the same cell. Although most aquaporins are only permeable to water, AQP3, AQP7, AQP9 and one of the two AQP10 transcripts are also permeable to urea and glycerol. AQP2 is the only water channel that is activated by vasopressin to enhance water reabsorption in the kidney collecting duct. Aquaporins are involved in renal water absorption, generation of pulmonary secretions, lacrimation, and the secretion and reabsorption of cerebrospinal fluid and aqueous humor. In the lung, AQP5 is responsible for the majority of water transport across the apical membrane of type I alveolar epithelial cells.

CHROMOSOMAL LOCATION

Genetic locus: AQP5 (human) mapping to 12q13.12; Aqp5 (mouse) mapping to 15 F1.

SOURCE

AQP5 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AQP5 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9891 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AQP5 (C-19) is recommended for detection of AQP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for AQP5 siRNA (h): sc-29717, AQP5 siRNA (m): sc-29718, AQP5 shRNA Plasmid (h): sc-29717-SH, AQP5 shRNA Plasmid (m): sc-29718-SH, AQP5 shRNA (h) Lentiviral Particles: sc-29717-V and AQP5 shRNA (m) Lentiviral Particles: sc-29718-V.

Molecular Weight of AQP5: 35 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214 or AQP5 (h): 293T Lysate: sc-173646.

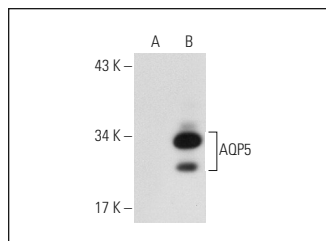
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

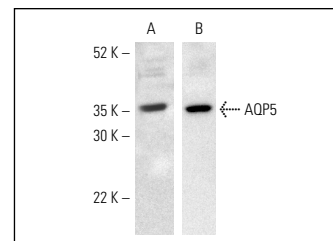
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



AQP5 (C-19): sc-9891. Western blot analysis of AQP5 expression in non-transfected: sc-117752 (A) and human AQP5 transfected: sc-173646 (B) 293T whole cell lysates.



Western blot analysis of AQP5 expression in KNRK whole cell lysate (A,B). Antibodies tested include AQP5 (C-19): sc-9891 (A) and AQP5 (G-19): sc-9890 (B).

SELECT PRODUCT CITATIONS

1. Lee, H.J., et al. 2006. Radioprotective effect of heat shock protein 25 on submandibular glands of rats. *Am. J. Pathol.* 169: 1601-1611.
2. Mendez, M.P., et al. 2006. Shedding of soluble ICAM-1 into the alveolar space in murine models of acute lung injury. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 290: L962-L970.
3. Cotroneo, E., et al. 2008. Early markers of regeneration following ductal ligation in rat submandibular gland. *Cell Tissue Res.* 332: 227-235.
4. Ueda, Y., et al. 2009. Purification and characterization of mouse lacrimal gland epithelial cells and reconstruction of an acinarlike structure in three-dimensional culture. *Invest. Ophthalmol. Vis. Sci.* 50: 1978-1987.
5. Watanabe, T., et al. 2009. Involvement of aquaporin 5 in differentiation of human gastric cancer cells. *J. Physiol. Sci.* 59: 113-122.
6. Ding, Q.W., et al. 2010. Functional vanilloid receptor-1 in human submandibular glands. *J. Dent. Res.* 89: 711-716.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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